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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,890	10/01/2003	Michael R. Longe	TEGI0013	5341
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GLENN PATENT GROUP 3475 EDISON WAY, SUITE L MENLO PARK, CA 94025			JORGENSEN, LELAND R	
			ART UNIT	PAPER NUMBER
			2675	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/677,890	Applicant(s) LONGE ET AL.	
	Examiner Leland R. Jorgensen	Art Unit 2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/18/03; 10/01/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 12, 14, 15, 17, 27, 31 – 35, 37, 39, 42, 58, and 60 are rejected under 35

U.S.C. 102(e) as being anticipated by Watanabe, USPN 6,567,072 B2.

Claim 1

Watanabe describes a text entry input system [character input device 1] that comprises a directional selection means [direction indicating device 2] plus one or more buttons or equivalent user input means [keys 4 – 7] and an output device [display device 9] with a text display area [function display unit 10]. Watanabe, col. 7, lines 20 – 44; and figure 1. Watanabe teaches a collection of linguistic objects [character sets 11 – 17 etc.]. Watanabe, col. 8, lines 5 – 24; and figures 3 & 4. Note that the specification teaches that “The linguistic objects... include but are not limit to: words, phrases, abbreviations, chat slang, emoticons, user IDs, URLs, non-English (such as Chinese or Japanese) characters.” Specification, page. 8. Watanabe teaches a processor [CPU 18]. Watanabe, col. 11, lines 25 – 36; and figure 11. Watanabe teaches that the processor comprises an object search engine, a distance value calculation module, a linguistic object module for evaluating and ordering linguistic objects, and a selection component which function

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as follows. The directional selection means is used to point in a direction of each of the letters. Watanabe, col. 9, lines 1 – 17. The processor calculates a distance to find letters and weight values for the letters in the pointing direction with the distance calculation module. Watanabe, col. 8, lines 24 – 35; and figures 5A – 5C. The processor retrieves a predicted list of linguistic objects based on the letters and weight values with the object search engine. Watanabe, col. 9, lines 1 – 17; and figure 7. The processor evaluates and orders the predicted list of linguistic objects with the linguistic object module. Watanabe, col. 8, lines 51 – 67; and figure 6. The selection component [determination key 4] selects a desired linguistic object from the predicted list of linguistic objects. Watanabe, col. 9, lines 18 – 47; col. 11, lines 25 – 50; and figures 8A, 8B, & 11.

Claims 12, 15, 58

Watanabe teaches that the directional select means is a joystick or omni-directional rocker switch. Watanabe, col. 7, lines 20 – 43; col. 15, line 4 – col. 16, line 15; and figures 1 & 19.

Claim 14

Watanabe teaches at least four buttons [keys 4 – 7] independent of the directional selection means. Watanabe, col. 7, lines 20 – 44; and figure 1.

Claim 17

Watanabe teaches that the system provides visual feedback [highlighting] on each movement of the directional selection means. Watanabe, col. 14, lines 15 – 43; and figure 18.

Claim 27

Watanabe teaches means for precisely selecting [determination key 4] the letters of the linguistic object. Watanabe, col. 9, lines 18 – 47; col. 11, lines 25 – 50; and figures 8A, 8B, & 11.

Claim 31

Watanabe teaches a means to change the last entered letter. Watanabe, col. 14, lines 15 – 37; and figure 18.

Claim 32

Watanabe teaches a text input method using a directional selection means [direction indicating device 2]. Watanabe, col. 7, lines 20 – 44; and figure 1. Each direction entered corresponds to one or more letters or symbols. Watanabe, col. 4, lines 13 – 33; and figure 4. The method comprises the steps of a user indicating a desired direction using the directional input means. Watanabe, col. 7 line 50 – col. 8, line 4; and figure 2. Watanabe teaches recording the direction in an angular notation comprising radians, gradients, degrees, or an equivalent units and retrieving a letter from a table or database based on the angle recorded. Watanabe, col. 8, lines 26 – 41; col. 19, lines 9 – 17; col. 10, line 16 – col. 11 line 22; and figures 5A – 5C.

Claim 33

Watanabe teaches that the angular direction is derived from recording the X-Y offset of a directional input device and converting that offset into an angular notation comprising radians, gradients, or degrees. Watanabe, col. 10, line 16 – col. 11 line 22; and figures 10A – 10B.

Claim 34

Watanabe teaches that the conversion is a variation on the standard Cartesian to Polar formula of $\text{Angle} = \arctan(Y/X)$ [equation 8]. Watanabe, col. 10, line 16 – col. 11 line 22; and figures 10A – 10B.

Claim 35

Watanabe teaches that the letter retrieved can be one of any number of adjacent or nearby letters or symbols. Watanabe, col. 4, lines 13 – 33; and figure 4.

Claim 37

Watanabe teaches that the letters presented are limited to those that match certain positions in linguistic objects listed in a database. Watanabe, col. 10, lines 9 – 15; and figures 8(c), 9(a), & 9(b).

Claim 39

Watanabe teaches retrieving a list of predicted linguistic objects which are corresponding to the sequence of various angles recorded. Watanabe, col. 8, lines 26 – 41; col. 19, lines 9 – 17; col. 10, line 16 – col. 11 line 22; and figures 5A – 5C.

Claim 42

Watanabe teaches selecting a desired linguistic object from the list of predicted linguistic objects. Watanabe, col. 8, lines 51 – 67; col. 9, lines 18 – 47; col. 11, lines 25 – 50; and figures 6, 8A, 8B, & 11.

Claim 60

Watanabe teaches a set of buttons [keys 4 – 7] that can be used with the directional selection means [direction indicating device 2], separately or simultaneously, to switch or choose

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input modes, to change from input to word selection, or to invoke other functions. Watanabe, col. 7, lines 22 – 43; and figure 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 3, 6 – 9, 29, 30, 43 – 45, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Vayda et al., USPN 5,798,760.

Claim 2

Watanabe does not teach an on-screen keyboard representation of a ring of letters or the letters' sub-word equivalents in each writing system.

Vayda teaches an on-screen keyboard representation [select/execute menu 2002] of a ring of letters [command selectors 2008]. Vayda, col. 17, lines 15 – 40; and figure 20.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the on-screen keyboard as taught by Vayda with the text input method as taught by Watanabe to simply “the interaction between the user and an application program.” Watanabe, col. 2, lines 54 – 55. See also Watanabe, col. 1, line 46 – col. 2, line 53; and col. 3, lines 6 – 16.

Claim 3

Vayda teaches that the on-screen keyboard is in the shape of a circle. Vayda, col. 17, lines 15 – 40; and figure 20.

Claim 6

Vayda shows an alphabetical order. Vayda, figure 20. Watanabe teaches a QWERTY order. Watanabe, col. 10, lines 11 – 15.

Claim 7

Vayda shows that the letters start at the 12 o'clock position. Vayda, figure 20.

Claim 8

Vayda teaches that the display may be rotated. Vayda, col. 15, lines 26 – 34. Thus it is inherent that the letters may have a moving starting position.

Claim 9

Vayda shows that the letters have a clockwise layout. Vayda, figure 20. Watanabe also teaches that the letters may be mapped clockwise. Watanabe, col. 9, lines 9 – 15.

Claim 29 & 30

Watanabe teaches that the last entered letter is indicated in the onscreen keyboard. Watanabe, col. 11, lines 39 – 50.

Claim 43

Watanabe does not teach that the directional input means is associated with an on-screen keyboard.

Vayda teaches directional input means [user input device 106] that is associated with an on-screen keyboard [command selectors 2008]. Vayda, col. 17, lines 15 – 40; and figure 20.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the on-screen keyboard as taught by Vayda with the text input method as taught by

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Watanabe to simply “the interaction between the user and an application program.” Watanabe, col. 2, lines 54 – 55. See also Watanabe, col. 1, line 46 – col. 2, line 53; and col. 3, lines 6 – 16.

Claim 44

Vayda teaches that the on-screen keyboard comprises a ring of letters, numbers or other symbols. Vayda, col. 17, lines 15 – 40; and figure 20.

Claim 45

Watanabe teaches that the data may be represented in Polar or Cartesian coordinate system for calculation. Watanabe, col. 10, line 16 – col. 11 line 22; and figures 10A – 10B. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the on-screen keyboard shown in Polar or Cartesian coordinate system.

Claim 57

Vayda teaches that the directional select means [user input device 106] may be a set of buttons [such as keyboard]. Vayda, col. 4, lines 45 – 51; and col. 17, lines 30 – 32.

5. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Watanabe in view of Yamashiki, JP 57010832 A.

Claim 4

Watanabe does not specifically teach a set of compass point letters, the compass point letters being placed at positions around in a linguistic object selection list, in a separate on-screen compass area, or around the directional selection means.

Yamashiki teaches that a set of compass point letters [key characters 5] are placed around the directional selection means [input means 3].

Claim 11

Watanabe does not specifically teach that a number of characters are printed around the directional input means.

Yamashiki teaches that a number of characters [5] are printed around the directional input means [input means 3].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the printed characters as taught by Yamashiki with the text entry system as taught by Watanabe to provide a visual indication of what character is chosen by the directional input means.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Vayda et al. as applied to claim 2 above, and further in view of Easty et al., USPN 6,448,987 B1.

Claim 5

Neither Watanabe nor Vayda specifically teach that the letters have bottoms towards the center of the ring.

Easty teaches that the letters [icons 11a & 12a] have bottoms towards the center of the ring [outer menu ring 11 and inner menu ring 12]. Easty, col. 4, lines 29 – 51; and figures 1a – 1c.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine direction of the icons in Easty with the text entry input system as taught by Watanabe and Vayda so that the “categories of contents be presented in a balanced fashion, so that each

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category is presented with equal prominence” and that “the user interface be easy to navigate as well as visually compelling.” Easty, col. 2, lines 51 – 55.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Vayda et al. as applied to claim 2 above, and further in view of Comerford et al., USPN 5,963,671.

Claim 10

Neither Watanabe nor Vayda teaches that each of the letters occupies different amount of radians depending upon use frequency.

Comerford teaches a keyboard where each of the letters occupies different amounts of space depending on use frequency. Comerford, col. 1, line 66 – col. 2, line 36.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of increasing the size of the more frequently used letters with the text entry input system as taught by Watanabe and Vayda to “attract the user and to facilitate quick recognition and selection.” Comerford, col. 2, lines 5 – 6. “However, regardless of the layout, an attractant, such as color, intensity, or size, is used to make it easier for a soft keyboard user to find the location of the subset of characters that the user is most likely to select.” Comerford, col. 2, lines 11 – 14. One in the art could easily change the size of the more frequently used letters by increasing the radians occupied by the letter depending on use frequency.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Watanabe

Claim 13

Watanabe does not specifically teach that the joystick has at least a 10° precision.

Watanabe does teach that the joystick [direction indicating device 2] has at least 12 directional stages. Watanabe, col. 11, lines 63 – 65; and figure 5A. With at least 12 directional stages, this provide a 30° precision [360°/12].

It would have been obvious to one of ordinary skill in the art at the time of the invention to increase the number of directional stages to 36 to provide a 10° precision and thus more possible letters with less steps.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Cecchi, USPN 4,439,649

Claim 16

Watanabe does not teach that the joystick or omni-directional rocker switch is a component of a multi-function video game controller.

Cecchi teaches that a joystick or omni-directional rocker switch is a component of a multi-function video game controller.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the video game controller as taught by Cecchi with the text entry input system as taught by Watanabe because that is what joystick are used for and it is fun.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Vayda et al. as applied to claim 2 above, and further in view of Selker, USPN 6,549,219 B2.

Claim 18

Neither Watanabe nor Vayda teaches that the visual feedback is a solid or gradient-fill pie wedge shape appearing on the on-screen keyboard, the pie wedge shape being centered on a current selected direction.

Selker teaches a solid or gradient-fill pie wedge shape appearing on the on-screen as a graphical user interface. The pie wedge is centered on the current selected direction. Selker, col. 2, lines 45 – 50.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the pie wedge shape graphical user interface as taught by Selker with the text entry system as taught by Watanabe and Vayda to increase quick object selections. Selker, col. 1, lines 44 – 48.

11. Claims 19 - 23, 40, 41, and 46 – 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Watanabe in view of Vargas, USPN 5,748,512.

Claims 19, 21, 23, 40, 52, 53

Watanabe does not specifically teach a linguistic model.

Vargas teaches that the order of the list of predicted linguistic objects is based on a combination value of a calculated weighted distance value and a linguistic model. Vargas, col. 1, lines 5 – 12; col. 1, lines 56 – 60; and col. 5, line 55 – col. 6, line 7.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the predicted linguistic objects as taught by Vargas with the text input method taught by Watanabe so that a likely correct entry is entered “even when the user touches a key off center.” Vargas, col. 1, lines 54 – 55. See also Vargas, col. 1, lines 43 – 46. Specifically, one in the art could easily use apply the prediction model of Vargas with the input method of Watanabe by replacing the keyboard of Vargas with the entry system of Watanabe. See Watanabe, col. 3, lines 51 – 54.

Claims 20, 22, 41, 47

Vargas teaches that the linguistic model comprises one or more of frequency of occurrence of a linguistic object in formal or conversational written text, frequency of occurrence of a linguistic object when following a preceding linguistic object or linguistic objects, proper or common grammar of the surrounding sentence, application context of current linguistic object entry, or recency of use or repeated use of the linguistic object by the user or within an application program. Vargas, col. 14, lines 18 – 40.

Claim 46, 48 - 51

Vargas teaches that the list of predicted linguistic objects is retrieved from a vocabulary database, and wherein a plurality of linguistic objects stored in the vocabulary database is ordered according to a linguistic model. Vargas, col. 7, line 54 – col. 8, line 2.

12. Claims 24 - 26, 28, 36, 38, 54 – 56, 59, 61, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of King et al., USPN 5,953,541.

Claims 24 - 26

Watanabe does not specifically teach that the linguistic objects longer than the number of actions of direction selection means are included in the list of predicted linguistic objects.

King teaches that the linguistic objects longer than the number of actions of direction selection means [stems 81, 82, and 84] are included in the list of predicted linguistic objects. King, col. 4, line 32 – 47; col. 11, line 40 – col. 12, line 4; and figure 1A.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the stems as taught by King with the text entry system as taught by Watanabe to “a disambiguating system that minimizes the ambiguity of entered keystrokes, and also maximizes the efficiency with which the user can resolve any ambiguity which does arise during text entry.” King, col. 3, lines 5 – 8.

Claim 28

King teaches that an exact spelling sequence is displayed in the text display area. King, col. 10, lines 5 – 33..

Claim 36

King teaches that the possible matching letters are presented in order of predicted likelihood of desired match. King, col. 5, line 66 – col. 6, line 7.

Claim 38

King teaches that the letters are presented only in the context of linguistic objects that the letters are a part of. King, col. 10, lines 5 – 33.

Claims 54 - 56

King teaches that the user selects a partial linguistic object and continues with more directional inputs. King, col. 4, line 32 – 47; col. 11, line 40 – col. 12, line 4.

Claim 59

King teaches that the on-screen keyboard further comprises a smart punctuation symbol, the smart punctuation symbol when retrieved is automatically interpreted as a punctuation symbol, diacritic mark or tonal indication at the place in the input sequence where a matching punctuation symbol, diacritic mark or tonal indication occurs in predicted words. King, col. 22, line 64 – col. 23, line 24. See also Watanabe, col. 9, lines 49 – 67.

Claim 61

King teaches invoking an undo means after selecting a linguistic object from the list of predicted linguistic objects and displaying the previous retrieved letters and showing previously retrieved list of predicted linguistic objects. King, col. 3, lines 41 – 45.

Claim 62

King teaches selecting a linguistic object from a text message and displaying the letters of the linguistic object as if the letters have been entered as exact letters and showing a retrieved list of predicted linguistic objects corresponding to the letters. King, col. 10, lines 5 – 33.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leland R. Jorgensen whose telephone number is 571-272-7768. The examiner can normally be reached on Monday through Friday, 10:00 am through 6:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CHANH NGUYEN
PRIMARY EXAMINER